engines of military type, supercharged, of Daimler-Benz design. Powered with two of these engines the German medium-heavy bombers (like the Heinkel He.111) have a speed of 250 m.p.h.

Thence we went out to the test plant. In one of the hangars an engine was undergoing its standard ten-hours' test. In a small room, that looked rather like the cockpit of a large aeroplane minus the flying controls and seats, instruments were mounted on either side of a single pane of glass through which the testers could observe the engine that was running in the hangar. The readings of pressure and temperature, fuel and oil consumption gauges were noted at regular minute intervals in the engine log.

I passed out into the open hangar and moved along the gangway. The noise from the open exhaust ports of the big engine was deafening, the blast of air like a hurricane. Yet outside the test shop the noise was negligible, for the silencing arrangements of the test plant were good. I understood that there were no complaints about noise from the local residents.

After its standard ten hours' test each engine is stripped, washed in cleaning baths, and thoroughly examined. Then it is reassembled and, without further running, despatched to the airframe manufacturers as a power unit for the aircraft that flow in a steady stream from the aeroplane factories of the Third Reich.

## *The German Air Museum*

After a talk over some morning sandwiches and coffee, my guide from the Air Ministry and I left the Daimler-Benz factory and went on to the Air Museum of Berlin. The Deutsches Luftfahrtmuseum in the Invalidenstrasse was made possible by the order of General Göring. But the credit for the collection of the exhibits must go to Captain Krupp, who for many years has specialised in the collection of suitable material.

Captain Krupp has charge of this museum, which is well worth a visit from the British visitor to Berlin. It is of especial interest to that large band of war-time pilots of the Royal Naval Air Service and the Royal Flying Corps who fought against the German Flying Corps during the Great War, for specimens of every type of war-time aircraft against which they fought (except seaplanes) are shown.

The exhibits are, however, not confined to military aeroplanes. Both pre-war and post-war aircraft are included in this historical exhibition of German aviation. Among them are fragile machines that flew in the first decade of the present century. Nineteenth-century aviation is represented by the gliders of Lilienthal and other pioneers.

Of the war machines, the collection ranges from the early Taube, through the 1915 types, such as the L.V.G., the Albatros and the Fokker monoplane, to the well-known later fighters—the Albatros D.III and D.V, the Halberstadt, the Pfalz, the Fokker D.VII, the Fokker triplane and a 1918 Fokker monoplane of shoulder-wing design, which I was told was very fast indeed for its time, but which was never made in quantity.

The scarlet D.V, that was the mount of Baron Manfred von Richthofen is a prized exhibit.

Of later two-seaters there are the Rumpler, L.V.G., Albatros, Junkers, etc. Wandering through the large hall among the old war-time machines one could recapture some of the fascination of those days when, in the summer of 1917, we used to tumble about in the Flanders skies.

Citizens of London who remember the air raids would be interested to see the central nacelle of one of the four-engined bombers used in the raids on London. They were big, clumsy affairs—the control nacelle is strangely like the nacelle of an airship. Photographs alongside show the complete machines. Looking on them now, they appear as antiquated as the ships in which Vasco da Gama sailed the sea over 300 years ago.

In the Deutsches Luftfahrtmuseum I saw for the first time war-time German aircraft with wooden wheels. Rubber was scarce in the Reich then. A synthetic substitute had not been found. The wooden rims were built up with wire spokes which gave a certain amount of resilience. But my guide from the Air Ministry told me the wooden wheels made "a terrible noise" when taking off and landing.

Among exhibits are two British aircraft—a D.H.4 presented by the Nizam of Hyderabad and a British fighter brought down on the Western Front. The latter was wrongly labelled. The card in front of it bore the inscription, "Bristol single-seat fighter, fitted with Humber engine." Actually it was my old friend the Sopwith Camel, with a Clergêt engine built by Humber under licence. I pointed out the error in classification to Captain Krupp, and I have no doubt that future visitors to the museum will find the description correct.

## *An Early Giant*

Of post-war machines there is a representative collection of the earlier German transport 'planes, crowned by the Dornier Do.X. The giant flying-boat stands in the large hall fully erected—a prophetic forerunner of eventual Transatlantic aircraft. As an aeronautical achievement the Do.X was magnificent, and it is worthy to be displayed as it now is in the Berlin Air Museum.

In one annexe is the Hall of Heroes, containing busts of the great German airmen, with relics of those who have died.

In the Gallery of Photographs are countless specimens of all types of aircraft, ranging from early prints of pre-flying days to modern times. For philatelists there is a fine collection of aerial stamps. For the curious there is a room dedicated to a collection of oddities—pieces that survived war- and peace-time crashes.

My one regret was that I did not have sufficient time to examine the individual exhibits with as much care and thoroughness as I would have wished. But I am determined when next I visit Berlin to reserve a whole day to spend among the war-time German aircraft. And I left the museum with the thought that the time must come when it will be regretted bitterly in Great Britain that we have not seen fit to preserve specimens of our war-time aircraft in an equal manner. The few types of historical aircraft that were shown in the last R.A.F. Display at Hendon could be outnumbered time and time again in Germany by the Deutsches Luftfahrtmuseum.

[*The next article in this series will describe a visit to the Richthofen Squadron.*]

## *Forthcoming Events*

**March 11. R.Ae.S. Lecture*: "Airscrew Blade Vibration," by Major B. C. Carter.**
**March 12. Leicestershire Aero Club: Annual Ball, Grand Hotel, Leicester.**
**March 12. Cinque Ports Flying Club: Annual Dinner and Dance. Grand Hotel, Folkestone.**
**March 16. R.Ae.S. Students' Section: Discussion on Stressed-skin Construction, R.Ae.S. Library, 7 p.m.**
**March 18. R.Ae.S. (Coventry Branch) Lecture: "Navigation," by Sqn.-Ldr. Godsave. Armstrong Siddeley Canteen, 8.15 p.m.**
**March 27-30. Yorkshire Gliding Club: Easter Meeting, Sutton Bank.**
**March 30—April 12. Ely Aero Club: Easter Instructional Course.**
**April 3. Rugby: R.A.F. v. Army, Twickenham.**
**April 8. R.Ae.S. Lecture*: "Control Problems," by Mr. A. G. Pugsley.**
**April 10. Aero Golfing Society: Martlesham Match.**
**April 15. R.Ae.S. (Coventry Branch) Lecture: "Production and Inspection Methods Applied to Screw Threads," by S. J. Harley. Armstrong Siddeley Canteen, 8.15 p.m.**
**April 22. R.Ae.S. Lecture*: "Power Plant Trends," by Mr. G. J. Mead.**
**May 6. Aero Golfing Society: Instone Trophy.**
**May 13. Leicester Airport Coronation Air Display.**

* These lectures take place at the Royal Society of Arts 18, John St., London, W.C.2, at 6.30 p.m. Admission is by ticket obtainable through a member.